![Broadcom logo] **BROADCOM**®

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BCM5691
PRODUCT
Brief

SCALABLE 12-PORT GIGABIT ETHERNET MULTILAYER SWITCH

BCM5691 FEATURES

- **12 10/100/1000 Mbps Ethernet ports supporting both copper and fiber connections**
- **Integrated high-performance SerDes**
  - Gigabit Ethernet SerDes per port
  - 4-pins per port SGMII interface to Gigabit Ethernet PHYs
- **32 million packets/second (line rate) aggregate switching capacity**
- **Supports 8 classes of service (CoS) per port**
- **Port trunking and mirroring supported across stacked switches**
- **Fully integrated data and address memory on-chip**
- **Advanced packet flow control:**
  - Head-of-line blocking prevention
  - Full-duplex flow control (802.3x compatible)
- **ContentAware™ network processing per port**
  - Line rate multifield packet classification
  - Supports IEEE802.1p, ToS/DiffServ, rate limiting, policing, priority tagging, and remapping
- **Support for jumbo Frames of up to 9 KB**
- **Advanced diagnostic features including IEEE 1149.1 JTAG boundary scan and BIST functionality**
- **Low-power, enhanced thermal 480-pin EBGA package**

SUMMARY OF BENEFITS

- **System vendors can build scalable high-performance, high port density Gigabit Ethernet LAN switches in several form factors.**
- **Multiple classes of service (CoS) and very low latency enable the support of VoIP and other voice, video, and data applications.**
- **Built-in high-speed serial interfaces with Broadcom-unique SerDes technology eases and accelerates system design, while reducing cost and conserving board space.**
- **Broadcom switch API compatability enables software reuse and faster time-to-market**
- **Small package and low power enables cost-effective and high-performance system design**

TARGET APPLICATIONS

- **Multi-layer switch in modular Gigabit Ethernet switches**
- **High-port-count stand-alone or stackable Gigabit Ethernet switches**
- **Chassis and in-server switch blade applications**

12-Port Gigabit Ethernet Multilayer Switch